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Computing at Lehigh

Lehigh University

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Lehigh University's
Computing Center Newsletter

Volume XIV, No. 4

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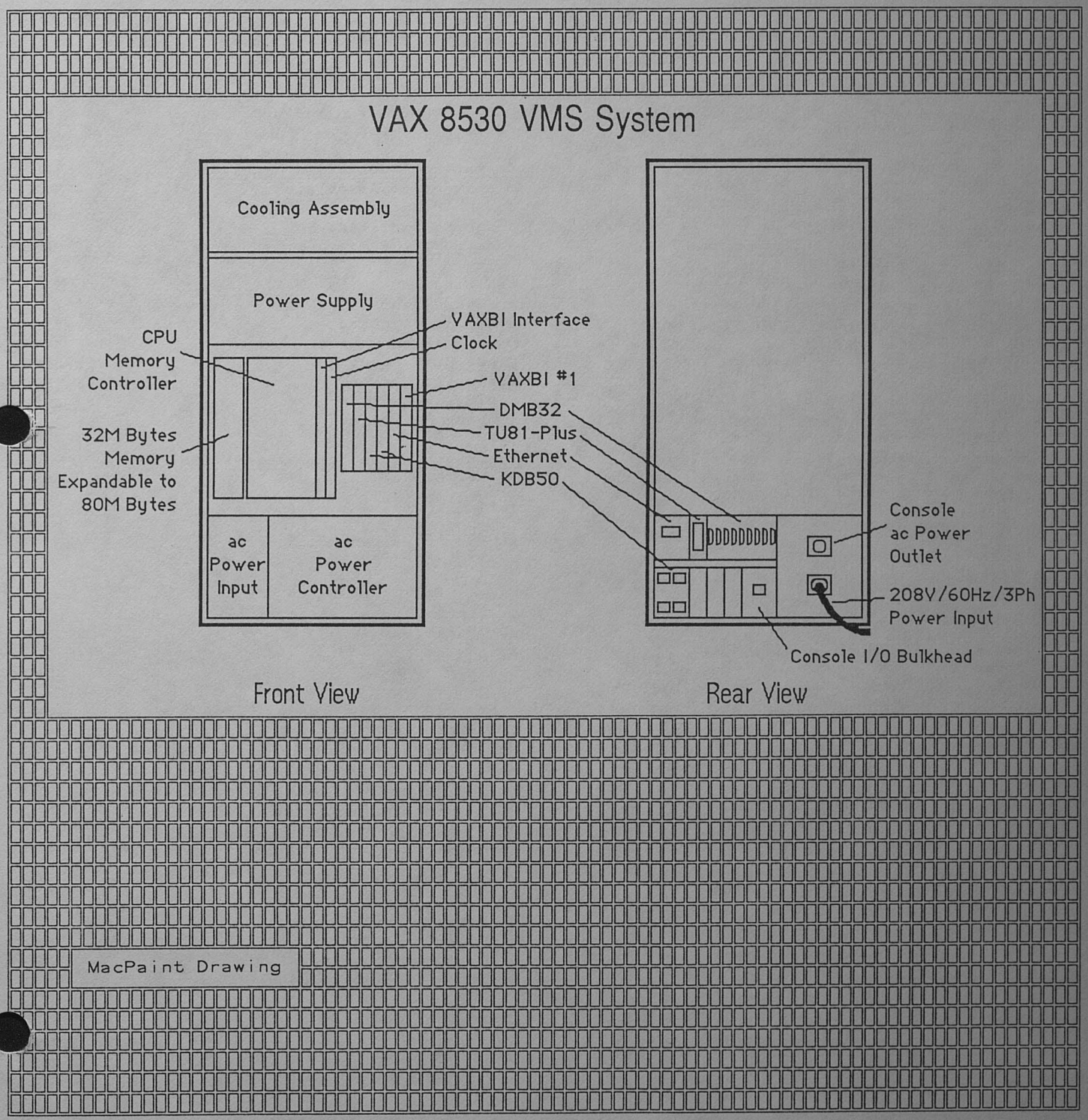

Lehigh University Computing Center Hardware

CDC CYBER 180 Model 850 (32 MBytes Memory, NOS V2.5.1 & NOS/VE V1.2.1)
DECSYSTEM-20 Model 2065 (2 MWords Memory, TOPS-20 V5(46)-3)
IBM 4381 Model 13 (16 MBytes Memory, VM/SP V1.4, MUSIC/SP V1.1)--Network Server
IBM 4381 Model 11 (8 MBytes Memory, VSE/SP V2.1.5)--Administrative
Zenith Z-100 PC Series (256-512 KBytes Memory, MS-DOS V3.10)

Hours of Operation

Summer Schedule

Users' Area, Room 180

Sun	Closed
Mon-Fri	6:30 am - 9:00 pm
Sat	9:00 am - 5:00 pm

Operator Support/Machine Room, Room 179

Sun	Closed
Mon-Fri	8:00 am - 9:00 pm
Sat	9:00 am - 5:00 pm

Consulting Window, Room 181

Sun	Closed
Mon-Fri	9:00 am - 12:00 noon
	1:00 pm - 5:00 pm
Sat	Closed

Business Office, Room 396

Mon-Fri	8:15 am - 12:00 noon
	1:00 pm - 4:45 pm

User Services, Rooms 185/194/196

Mon-Fri	8:00 am - 12:00 noon
	1:00 pm - 5:00 pm

Operations, Room 171

Mon-Fri	8:00 am - 11:30 am
	1:00 pm - 4:30 pm

Microcomputer Store, Sayre Bldg. #26

Mon-Wed	9:00 am - 5:00 pm
Thu	9:00 am - 7:00 pm
Fri	9:00 am - 5:00 pm

Special Forms - CYBER 850

Liquid Ink Plots

Tue,Fri	8:00 am - until done

Special Forms - DEC 20

/Forms:Unline

Daily	2:00 pm - until done

/Forms:Laser

Daily	11:00 am - 1:00 pm (Except Sun.)
	6:00 pm - 8:00 pm (Except Sat.)

Special Forms - Network Server

Talaris

Daily	3:00 pm - 4:00 pm

Consulting Policy

Consultants are provided for assisting users in the use of Lehigh University's computer resources. Consultants are not authorized to assist with interpreting course assignments, to write code, or to debug program logic.

When in need of a consultation, users are requested to contact the LUCC student consultants (present at many of the public sites and at ext. 84141), who are hired to augment the full-time staff consultants.

Computing Center Directory

Information About Policies and Plans

Director
William R. Harris (215) 758-3830
User Services Manager
Timothy J. Foley 758-3990
Operations Manager
Carol D. Rauch 758-3989
Microcomputer Store Manager
Robert R. Kendi 758-4606
Systems Programming Manager
Kevin R. Weiner 758-3991

Information About Bills Received

Administrative Associate
Joseph P. Holzer 758-3825
Accounting Assistant
Annette L. Ruhe 758-3825

Consulting

User Consultants
Blair R. Bernhardt 758-3994
Frederick W. Chapman 758-3218
Linda S. Gingery 758-5152
Monica A. Newman 758-3995
Joel W. Robertson 758-3985
Kenneth R. van Wyk 758-498

Information About Software Availability

Software Librarian
Judy K. Allio 758-3993

Systems Status, Technical Information

On-duty Consultant 758-4141

General User Information

Data Processing Assistant
Ann Marie Matusa 758-3990
Accounts Coordinator
Doris A. Oravec 758-3992

Information About Tapes and Supplies

D. P. Tape Librarian
Monica M. Herrera 758-4140

On-Campus Computer Access

CYBER 850	(300/1200 Baud)	Ext. 46812
	(9600 Baud)	Ext. 46800
DEC 20	(All Baud Rates)	Ext. 46200
IBM 4381	(All Baud Rates)	Ext. 46000

Off-Campus Computer Access

CYBER 850	(300/1200 Baud)	974-6812
DEC 20	(300/1200 Baud)	974-6200
IBM 4381	(300/1200 Baud)	974-6000

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Computing at Lehigh is a bi-monthly report on computing published by the Lehigh University Computing Center. Article contributions are primarily by Computing Center staff, although articles by users may also be included at the discretion of the Computing Center. Instructions for submitting articles can be found in the *Computing at Lehigh* contribution information included at the end of this newsletter.

Computing at Lehigh is distributed free of charge to the Lehigh University Computing Center user community and other interested parties. If you wish to be placed on, removed from, or have your address changed on the mailing list, please return the *Computing at Lehigh* mailing list form included at the end of this newsletter.

Computing at Lehigh is formatted using Scribe Version 5 on a DEC 20 and printed on a Talaris 1200 laser printer.

Feedback

Your suggestions, complaints, or comments about Computing at Lehigh *can be included and responded to in* Feedback. *See the* Computing at Lehigh *contribution information at the end of this newsletter for details on how to submit letters to* Feedback.

From the Director

by William R. Harris

In the November *Computing at Lehigh* I wrote about the plan to remove the DEC 20 computer, no later than the summer of 1988. This was the recommendation of the CCAC in 1985-86. Bruce Fritchman and I have consulted with many of the faculty that would be affected by the removal of the DEC 20 and talked to others about their computing needs, now and in the future. There was agreement among the faculty we spoke to that the replacement should be a VAX computer running the VMS operating system. This would make the transition from the DEC 20 as painless as possible and would enable LUCC to run software which it has not been able to run on its machines in the past.

I am pleased to tell you that LUCC has ordered a DEC VAX 8530 computer to replace the DEC 20, and in addition we will be able to run the DEC 20 till the end of May 1988. The new VAX is due to be delivered by the end of May 1987 and we will attempt to have it available, at least on a limited basis, by September 1987. This will give DEC 20 Users and LUCC a full nine months to move applications to other machines. I don't expect that all the DEC 20 applications will necessarily be moved to the VAX during the conversion, since we will be considering moving some of them to the other mainframes and micros.

The VAX 8530 is a recently announced machine with approximately the same processing power as the DEC 20. It will have 72 ports (all of which will not be used initially, as some of the InteCom lines will temporarily remain connected to the DEC 20), 32 megabytes of memory, and approximately 2.5 gigabytes of disk storage. In addition there will be a tape drive and a dot matrix line printer.

The Digital Equipment Corporation software will be the VMS operating system, and the BASIC, FORTRAN, COBOL, Pascal, and C languages. In addition we will be supporting the VAX DBMS (Data Base Management System). No decisions have been made about third party software on the VAX at this time, as they will depend on which DEC 20 applications will be moved to the new machine.

Switching the topic from mainframes to micros, the Microcomputer Store will be coming around over the summer to service the Zenith micros which were distributed to the faculty and were covered by the Bohemian Maintenance Program. In addition to the services of preventive maintenance and of replacing the ROM with a more up-to-date one, I am happy to tell you that we will also add additional RAM memory to the ZW-158 machines which have not already been upgraded—bringing them to a total of 640K RAM. There will be no charge for this service. We have found that as applications such as NETDIAL become more sophisticated, we exceed the memory limits of the original machines. This upgrade will also make it possible to run other applications which you were not previously able to run.

Mainframe Computing

CYBERS to be Converted to 64 Character Set

by Stephen G. Roseman

In the last issue of *Computing at Lehigh*, there was an article announcing that we will be converting the NOS Operating System on the CYBERs from 63 to 64 character set during the weekend of May 23, 1987. In that article, we described the whats and whys. Now, since this is the last issue of *Computing at Lehigh* for the semester, it becomes necessary to tell you how.

To Reiterate

The NOS internal character code for the colon (:) character will be used for the percent sign (%), and the colon will be assigned to the previously unused 00_8 (octal zero) value. Therefore, all files which contain a colon will need to be converted,

except for any 8-bit ASCII files you may have (which is rather unlikely.)

What's a Person to Do?

We have written a command which will easily convert your source and text files. It will be installed on the system on May 23, so you don't accidently mess up your files beforehand. The following is a description of what to do in each of the most common types of files.

Normal Source Programs, Stored on Disk

Use the command:

```
TO64(filename)
```

where *filename* is the name of the file you want converted. (The command locates both local and permanent files.) The file will be replaced with the converted version. If the file contains Senator "Save" information at the end (option SAVE is on in Senator), the Save information will be retained.

Files on Tape

Copy any files you need to convert from tape to disk, convert, and then copy back to tape.

Compiled Programs, Relocatables, Absolutes, Libraries, etc.

These cannot be converted. You must recompile any program (after conversion of the source file) which uses the colon character (ie., in output text or as a literal within the program). You need not recompile others, although we suggest that you do so just to be sure.

UPDATE Program Libraries

These do not need to be converted. The Update utility will handle conversion automatically when extracting the text from the library.

Upper Lower Case Files, like BITNET Mail Files, etc.

Most Update library files are in a character code known as 6/12-ASCII. These need to be converted, as with normal text files above, using the command:

```
TO64(filename,ASCII)
```

That second parameter is necessary because the 6/12 form of the colon and percent sign are different than the normal 6-bit display code.

As mentioned above, if you have any 8-bit ASCII files, they need not be converted.

Other Types of Files

We have covered nearly all of the cases above. Any other types and structures of files will have to evaluated individually.

Problems, etc.

TO64 will not convert a file with any 00_8 (octal zero) characters already in it (the conversion will abort with an error message), unless you include a third parameter, the NO (no-abort) parameter. This should prevent the possibility of messing up a non-text file or converting a text file twice.

If you forget to specify that a text file is ASCII, but it is, or vice versa, the process is reversible:

Forgot to specify ASCII for a 6/12 file:

```
TO64(file)
   ..OOPS, file is ASCII.
TO64(file,,NO)
   ..That 3rd parameter allows 00₈ characters
   in the source file.  This restores file to
   it's original state.
TO64(file,ASCII)
   ..now you did it right.
```

Accidently specified ASCII for a non-ASCII file:

```
TO64(file,ASCII)
   ..OOPS, file wasn't really ASCII.
TO64(file,ASCII)
   ..This restores file.
TO64(file)
   ..finally right.
```

But watch out for that no-abort parameter. If you use it on a non-text file, the process is non-reversible. You have lost your file. Use it only in the above case, or when you really know what you are doing.

New CYBER KERMIT Version 3

by Stephen G. Roseman

A new version of KERMIT is available on the CYBER which contains many new features and changes. This version was produced by LUCC and has been sent to Columbia University to be distributed as the standard CYBER NOS KERMIT.

1. Wildcard file names on the SEND command and server mode GET command. An asterisk (*) stands for zero or more characters. A question mark (?) stands for a single character.

   For example:

   *BUG
   all files ending in BUG.

   DOG
   all files containing DOG.

   F* all files starting with F.

   F?X*
   all files whose names start with F and contain X in the third position, followed by zero or more characters.

2. Local and permanent file SEND and server mode GET. If no local files match the request, the user's permanent file catalog is searched.

   If the specified file name is preceded by "L:", only local files are sent. If preceded by "P:", only permanent files are sent.

3. A DIRECTORY command and server mode REMOTE DIRECTORY command. Lists local (by default) or permanent file names. Accepts wildcards and/or L: and P: specifications (shown above).

4. Automatic recognition of display code, 6/12 ASCII, and 8/12 ASCII file text modes on SEND. Receives 6/12 ASCII by default.

   The SET FILE-MODE command allows BINARY and TEXT file types.

   SET TEXT-MODE allows AUTO to set automatic recognition (as above), or DISPLAY, 6/12-ASCII, or 8/12-ASCII to force a specific character translation for TEXT file mode.

   BINARY file mode stores characters as 7.5 8-bit characters per 60-bit CYBER word.

5. Supports repeated character compression (if the micro KERMIT allows).

6. Supports long file transfer packets up to 1000 characters (if the micro KERMIT allows).

   Use the SET RECEIVE PACKET 1000 command within CYBER KERMIT to enable long packet receive. To send long packets, enter the above command in your micro KERMIT, if it supports long packets (see below).

7. CYBER KERMIT no longer affects the parity of your terminal connection. If you have trouble sending or receiving files, check your parity setting. On the CYBER, the parity at login is set to NONE. Note that changing your terminal class (TC parameter) via TRMDEF or %TC= will reset your parity setting.

8. KERMIT will take commands from the file KERMINI at startup time. You may use this to set non-standard parameters, start up a server automatically, etc. KERMIT will first look for a local KERMINI, then for a permanent file KERMINI.

9. There is now a TAKE filename command to direct KERMIT to read its commands from a local or permanent file. It searches for local and permanent files like the SEND command, above.

10. When files are being received by the CYBER, KERMIT will now attempt to use up to three characters of the micro's filename extension as part of the CYBER's file name. This allows file transfers of the form LONGNAME.* to proceed with fewer file name conflict problems.

To access KERMIT Version 3, enter

```
KERMIT,3
```

at the NOS command prompt. (If you already have a KERMIT local file, enter

```
UNLOAD,KERMIT
```

first). You should get an identification line followed by the prompt.

```
Cyber-170/NOS KERMIT Ver 3.3.F (87/03/31)
Kermit-170>
```

After the end of the semester, KERMIT Version 3 will become the default version, and the current Version 2 will be removed from the CYBER 850.

Enter HELP within KERMIT to obtain assistance.

To get a version of MS-KERMIT (Version 2.29b) which supports long packets and repeated-character compression, enter the following commands on the CYBER (requires using CYBER NOS KERMIT Version 3) and from MS-KERMIT:

```
FETCH,MSK229B/UN=LIB.
KERMIT,3.
SET FILE-MODE BINARY
SEND MSK229B
Ctrl-]c  (escape back to your micro to
         receive file)
RECEIVE KERMIT.EXE
CONNECT  (connect back to the CYBER)
EXIT
```

The file KERMIT.EXE (MS-KERMIT version 2.29b) can now be run by typing KERMIT at the DOS prompt.

Please contact LUCC User Services at ext. 83990 if you have any problems with CYBER NOS KERMIT Version 3.

CYBER 850 Software Library Changes

by Judith K. Allio

SMPAK Now Available

Now available on the CYBER 850 is SMPAK, a collection of FORTRAN-callable subroutines for solving the $n \times n$ system of linear equations $Mx = b$ when the coefficient matrix M is large and sparse. The routines in SMPAK take advantage of the sparse structure of M, solving the triangular systems without storing or operating on zero entries. Details on the storage scheme used by SMPAK, as well as subroutine description and usage information, can be found in the *SMPAK User's Guide*, available at the central site users' area and on one-day reserve at the Fairchild-Martindale campus library.

To access SMPAK, on either NOS or NOS/VE, type:

```
USE,SMPAK.
```

at the NOS or NOS/VE prompt prior to execution of your FORTRAN 77 program.

Also available for your use are the Symmetric and Nonsymmetric Test Drivers (STST and NTST, respectively). Users should feel free to copy and modify these programs to meet their own needs. (See the *SMPAK User's Guide* for more information.) To get a copy of a test driver, type:

```
FETCH,STST/UN=LIB.
                  or
FETCH,NTST/UN=LIB.
```

at the NOS prompt, or

```
COPY_FILE .LIB.EXAMPLES.STST STST
                  or
COPY_FILE .LIB.EXAMPLES.NTST NTST
```

at your NOS/VE prompt.

DEC 20 Software Library Changes

by Judith K. Allio

New Version of SLAM II Available

A new version of SLAM II, Version 3.2, is available on the DEC 20, on directory <NEW>. Version 3.2 will be the version accessed after issuing a

```
DEFINE SYS: NEW:
```

command in a terminal session. This new version will become the default version on the system on

May 29th, 1987, at which time the current default version, 3.0, will be moved to directory <OLD>.

A summary of the enhancements included in the upgrade to version 3.2 can be found on a HELP file for SLAM, accessed by issuing a

```
HELP SLAM
```

command. This HELP file also contains information on how to access SLAM, a general description of how to use SLAM, and details about where documentation on SLAM can be found.

Micro Computing

Displaying CYBER Plot Files Using PC-PLOT

by Stephen G. Roseman

The TEKFILE program on NOS (used for previewing CalComp plot on a graphics terminal) has been enhanced to support the PC-PLOT terminal emulator running on a Zenith micro with a monochrome monitor, standard color monitor (CGA type), or enhanced graphics monitor (EGA type). The following are the commands to use for each model, with the PC-PLOT setup options required for each.

Display	Command	Screen Resolution	Terminal Emulation Type
Monochrome	PCMDRAW	Std IBM 640x200	VT-100/Tek 4010
Color	PCDRAW	Std IBM 320x200 4 Col	VT-100/Tek 4010/Limited Tek 4027
EGA	PCEDRAW	Enh IBM 640x350 16 Col	VT-100/Tek 4010/Limited Tek 4027

In addition, if you have an HP plotter attached to your micro, you can use PC-PLOT to display and capture a drawing on disk, and then draw it on your plotter. Use the NOS command HPDRAW to display the CYBER Plot file (note that it may not look correct when displayed, but should be proper when plotted). See the PC-PLOT documentation for other steps to follow for capture and plotting.

PC-PLOT is available for sign-out in the central site user's area and for purchase at the Microcomputer Store. In addition, copies will be made available for sign-out at each of the public micro sites for the fall semester.

Public Domain Review: ARC files

by Kenneth R. Van Wyk

There's a large amount of free software available to the PC user today. This software is referred to as public domain (pd, for short) software. A warning, however; much (if not most) of it is useless to most people. However, by weeding through the available pd software, one can often find some very useful and very well written programs. In addition to this pd software, there is a software distribution scheme known as "shareware". A shareware program is a program which may be freely given away, copied, etc. What differentiates shareware from public domain is that a shareware author requests a monetary donation for his/her time, but only if you find the program to be useful; kind of like test driving a car. Generally, the donation is small (around $20), and includes other benefits, like a printed user manual, free updates to future releases, etc., and is well worth the small amount asked. Shareware programs are usually copyrighted and may have certain restrictions on their use. For example, some shareware authors restrict their program's usage to non-commercial purposes only.

With all these programs available, the only problems that remain are A) finding the programs and copying them, B) weeding out the useless ones, and C) extracting the programs. This last problem is the subject of this article. Many public domain and/or shareware programs are distributed via public computer "bulletin boards" in a compressed form. The commonly used standard for this compressed format was created by a shareware program called ARC (which stands for archive). ARC can store a file (or several files) in a single ARChive file and later extract it (them). In the process of archiving files, ARC automatically compresses each file into a more

compact form. There are several advantages to storing files in ARC format. They include:

1. Eliminates cluttering of directories since each software package, with all its files, can be stored in one file.
2. Saves disk space since ARC compresses the files in the ARChive file.
3. Makes it easier to copy a software package since only one file needs to be copied, even if the software package has several files.

Somewhere along the line, another software author, PKWARE, Inc., decided that ARC wasn't good enough or fast enough, so they set out to "build a better mousetrap". This better version of ARC is called PKARC, and is now another well accepted standard, and it is compatible with ARC. That is, an ARC file created with ARC can be manipulated with PKARC, but not necessarily vice versa. PKARC is distributed on many public domain PC bulletin boards, and is available for copying from the INFO MICRO menu on the Network Server and from User Services at ext. 83990.

PKARC is distributed as one self-extracting ARC file. That is, to extract all the related PKARC files, just run the PKARC program as distributed. It will then perform a self-extraction of all the five files associated with PKARC. They include three documentation files, and two program files, PKARC.COM and PKXARC.COM. Unlike ARC, there is a separate program for creating ARC files (PKARC.COM) and for extracting ARC files (PKXARC.COM).

The use of PKARC and PKXARC is rather self-explanatory. If you forget the command-line options, just enter:

```
PKARC
        or
PKXARC
```

and the programs will show you their own lists of possible parameters. In summary, however, you may enter

```
PKXARC arc-file
```

to extract the entire contents of the file called, in this example, *arc-file*. The file extension of .ARC need not be specified. To create or add to an ARC file, you may enter

```
PKARC A arc-file file(s)-to-add
```

For example, the command

```
PKARC A MYARC *.*
```

would add all of the files in the connected directory to the ARC file called MYARC.ARC.

In fact, PKARC can be used for other things than extracting public domain software. For example, hard disk backups. Specifically, it's very easy to create an ARC file for each subdirectory on a hard drive, and then copy all the ARC files onto floppies. Then, when (and if) need be, extract the file(s) from the backups that you may need. It is a cheap and rather easy form of hard disk backup, and it uses much less floppy disk space.

More information on the command syntax for PKARC and PKXARC is available in the documentation files for each program, and on-line, as mentioned above. In a future *Public Domain Corner*, look for ways to find useful public domain programs.

Microcomputer Software Library Changes

by Judith K. Allio

Microsoft Project Upgrade

Microsoft Project, Version 3.0, is now available on the 12 fixed-disk systems in the micro lab at 292 Fairchild-Martindale. Some new features in version 3.0 include:

- Increased speed. Faster calculations than in previous versions.
- New reports. Two new reports, one showing resource use in terms of time, the other providing a list of activities with their scheduled start and finish dates, and their durations.
- Easier transfer of information between Microsoft Project and other applications. Export all or part of a project's activity, resource, and calendar information to a text file, then to another application. Import information

into the current project from a text file.

Use of the new features are described in the front of the *Microsoft Project* manual available from the consultant on duty in the micro lab.

VP-Planner Version 1.34 Upgrade

VP-Planner, Version 1.34, is now available at all public microcomputer sites. New features and enhancements in version 1.34 are described in a file called "README", which can be found on the VP-Planner program disks at the sites. Some of the new features described in the "README" file include:

- Password protection capability for worksheet files. Files can be password protected when they are being saved (/FS) or extracted (/FX).
- Some worksheets created by 1-2-3 may have resulted in invalid cell addresses when read by VP-Planner. This has been fixed in this version.
- Files with extensions other than .WKS can now be read directly.
- /Graph Save command. This command saves the current graph in a .PIC file on disk that can be used by other programs.
- /Graph Look command. This command allows saved graph .PIC files to be displayed. Saved .PIC files can be printed by pressing Shift-PrtSc while the graph is displayed.

Network Operation

Using BITMAIL for Sending BITNET Mail on the Network Server

by Kenneth R. van Wyk

This article is intended for all BITNET users on the IBM 4381 Network Server mainframe. Due to limitations in the standard memo facility of MUSIC, LUCC is making available a locally-written program called BITMAIL. BITMAIL should be used whenever sending BITNET mail to any non-MUSIC site; which is the majority of other computers. The reason for this is that BITMAIL uses universally recognized message headers, while the memo facility does not. This can cause a memo facility message to be ignored by many other BITNET sites. In addition, BITMAIL has the capability of sending mail to several "gateways" to other computer networks such as ARPANET, CSNET, UUCP, VNET, etc.

To use BITMAIL, type SE B at the LUNA menu (not just SE). You will then be prompted for the destination user id, the destination node, the destination user's real name (optional), and an optional message subject. Enter the required first two fields and any of the two optional fields by TABbing to the field and typing in the contents of that field. When finished press RETURN. After this, using BITMAIL is identical to using the standard memo facility; you enter your memo and press the F3 key to send the memo. As with most MUSIC applications, on-line help is available by pressing the F1 key while in the BITMAIL screen (or in the editor).

Note that the standard NICKNAME facility does NOT work in BITMAIL. This is due to limitations in NICKNAME. Instead, there is a separate nickname facility, called BITNAME. For information on using BITNAME, contact User Services at ext. 83990.

To send mail to networks other than BITNET, enter .netname after the node id. For example, to send mail to <JOEID@JOECOMPUTER.ARPA>, an ARPANET user, enter JOEID in the destination id field, and JOECOMPUTER.ARPA in the destination node field. This will cause BITMAIL to route the message to the appropriate gateway between BITNET and the desired destination network.

In addition to these features, BITMAIL offers the optional ability to include a "trailer" file at the end of every memo. This is commonly used for including the sender's name, BITNET address, etc. To use this feature, edit (or create) a file called BIT.TRAILER and place in it the information that you desire to be included at the end of EVERY memo you send.

For more information on using BITMAIL, contact User Services at ext. 83990.

New BITNET Facilities Available on the CYBER

by Stephen G. Roseman

Two new features have been added to the BITNET support software available on the CYBER 850.

You can now address mail directly to users on any system connected through any of the 100 gateways connected to BITNET. For example, when prompted for the Destination User ID, you may enter an address of the form

```
JOE@CU20B.COLUMBIA.EDU
                or
REGGIE%UK.AC.PADDINGTON.STATION@AC.UK
```

and the BITMAIL program will put routing information around your message and send the message through the correct gateway system.

We have also added a NAMES file feature, where you can create nicknames for your commonly-used mail recipients. Each nickname has associated with it a "real person" name and a BITNET (or other network) address. For example:

```
Nickname: XYZ
Name: Xavier Zanzibar
Address: XYZ4@LEHIGH

Nickname: JOE
Name: Joseph S. Rigatoni
Address: JOE@CU20B.COLUMBIA.EDU

Nickname: Bear
Name: Paddy Bear
Addrs: REGGIE%UK.AC.PADDINGTON.STATION@AC.UK
```

This facility is accessed from the BITNET menu. The first time you run it, the program will ask for your name, which is then put in the header of each message you send. When the program asks for a COMMAND?, enter a question mark (?) to get a list of commands. Your NAMES information is stored in an indirect access permanent file under your NOS username.

Laser Printing Service for the CYBER 850

by Joel W. Robertson

A new command has been written which sends CYBER 850 files to be printed on the Network Server IBM 3820 laser printer. To have the LPRINT command prompt for options and provide help, enter:

```
LPRINT?
```

and enter a ? at each prompt. The full syntax of the LPRINT command is:

```
LPRINT,fname,fmode,cc,or,pgfmt,lpp,fnt.
```

where (default values are underlined):

fname (file name)
: is the name of the file (which can be either local or permanent) to be printed,

fmode (file mode)
: is one of DISPLAY, ASCII, or ASCII8,

cc (carriage control)
: is either YES (for files with carriage control) or NO (for files without carriage control),

or (orientation)
: is either L (for landscape—across the page) or P (for portrait—down the page),

pgfmt (page format)
: is either DUPLEX (double-sided) or SINGLE (single-sided),

lpp (lines per page)
: is either 80 or 60, and

font
: is either AUTO or the four character name of an IBM 3820 font.

Some examples: to print FORTRAN output on the IBM 3820 laser printer, enter:

```
LPRINT,fname.
```

To print a FORTRAN source listing, enter:

```
LPRINT,fname,,NO.
```

To print an ASCII file (such as a BITNET message file) in the portrait orientation, enter:

```
LPRINT,fname,ASCII,NO,P.
```

General Interest

Consultant's Corner

Consultant's Corner *is a section which contains answers to frequently asked questions. If you have a question which you would like answered here (or have some information which you would like to share), please see the* Computing at Lehigh *contribution information included at the end of this newsletter for complete submission instructions.*

Viewing and Printing CYBER BITNET Files

by Joel W. Robertson

When using the BITNET command[1] to read BITNET mail on the CYBER 850, the mail messages that appear on the screen often contain both upper and lower case characters. But when the local file to which a message was written is rewound and copied to the screen or printed, the message appears garbled with "^" characters throughout the text which now appears to be all uppercase.

When messages appear garbled in this manner, it is because the message file is in ASCII and NOS is set to the DISPLAY character set.

To view the messages on the screen properly, use the TYPE command. The syntax of the TYPE command is:

```
TYPE,fname.
```

where *fname* is a valid NOS filename. Note that the file does not need to be local before issuing this command.

To have the messages print properly, use the PRINTA command to print to the CYBER 850 line printer. The syntax of the PRINTA command is:

```
PRINTA,lfn,shift.
```

where *lfn* is the name of the local file to be printed and *shift* is either SHIFT (for files without carriage control) or NOSHIFT (for files with carriage control).

[1]See Technical Bulletin #14, *BITNET Usage on the CYBER 850 and the IBM 4381*, for a description of this command.

As an alternative, the LPRINT command can be used to print to the IBM 3820 laser printer. See *Laser Printing Service for the CYBER 850* on page 9 for more information on the LPRINT command.

Checking the Time

by Joel W. Robertson

Most computers on campus have an internal clock which keeps the date and time of day. The following are the commands to issue for various computers.

Zenith Z-100 PCs—MS-DOS

TIME
displays time only

DATE
displays date only

DEC 20—TOPS-20

DAYTIME
can be abbreviated DA*; displays both time and date*

CYBER 850—NOS

DISPLAY,TIME
displays time only; compressed format: 1622 3126B *is 4:22pm*

DISPLAY,DATE
displays date only; compressed format: 87Ø43Ø 3244Ø36 *is April 30, 1987*

DAYTIME
can be abbreviated DAY*; displays both time and date; also displays phase of moon*

CYBER 850—Senator

ALARM 0
can be abbreviated ALA 0 *(zero); displays time only*

CYBER 850—NOS/VE

TIME
displays time only

DATE
displays date only

CYBER 850—VX/VE

DATE
displays both time and date

NETWORK SERVER—IBM 4381

Press the return key while in the LUNA main menu; displays both time and date

Newsbriefs

The Technical Word Processing subcommittee of the CCAC has recommended EXP, by Wadsworth & Brooks/Cole, to be purchased. The recommendation has been approved, and a **site license for EXP will be purchased.** EXP, which runs on IBM-compatible microcomputers, supports the HP LaserJet printers, 8-pin & 24-pin dot matrix printers, CGA, EGA, & Hercules monitors, and is very fine at creating both technical and non-technical text. Expect EXP for the fall semester.

HP LaserJet **Math Elite J font cartridges** are now available at all the public sites with HP LaserJets. In addition to the elite characters, this font cartridge enables the LaserJet to print math characters, including integrals, math greek, large delimiters, etc. If you need to use this cartridge, request it from the consultant on duty.

The Laser Printer Search Committee is currently studying the laser printing needs of the user community and the current trends in text processing. This is in order to recommend an **additional laser printer** to ease the load on the presently overloaded Talaris 1200.

A Glance Back at History

An excerpt from the June 17, 1977, issue of *USER*:

NEW COMPUTING SYSTEM ORDERED

After more than two years of formal planning and evaluation, an order was placed on May 31 for a DECSYSTEM 20 computer and a PDP-11/34 minicomputer, to be operated as a single computing system. The DECSYSTEM 20 initially will be configured with 128K 36-bit words of central memory, 176 million characters of disk storage, 16 asynchronous ports, one 9-track magnetic tape drive and a 240 line-per-minute upper/lower case printer. The PDP-11 will have 96K 16-bit words of central memory, 7.5 million characters of disk storage, 16 asynchronous ports, tape cassette and/or floppy disk capacity, and a 180 character-per-second matrix printer. FORTRAN, BASIC, COBOL, and a data base management system will be supported by the combined system.

Staff Changes

On April 10th, Regina Kline took the position of Academic Department Coordinator at the Materials Science Engineering Department, leaving her position as Administrative Assistant at the Microcomputer Store where she had worked for two years. We wish Gina well at her new position.

Joining the Microcomputer Store as Administrative Assistant on May 11th was Susan Cole. Susan has worked at Lehigh for seven years, most recently in the Bursar's Office as Accounting Clerk. Welcome to the Computing Center staff!

About the Cover

The sketch on the front cover is a MacPaint drawing of a Digital Equipment Corporation VAX 8530 VMS system. The system shown is configured as the recently ordered Computing Center VAX will be configured. The items labeled DMB32, TU81-Plus, Ethernet, and KDB50 are VAXBI adaptors for terminal/modem communications, a TU81-Plus magnetic tape drive, an Ethernet port, and an SA482 disk storage array respectively. The system is scheduled to arrive in late May of this year. See the Computing Center Director's column on page 2 for more information.

Computing at Lehigh—Contribution Information

Computing at Lehigh encourages contributions for articles, *Feedback*, and *Consultant's Corner.*

We prefer that contributions either be submitted electronically via DEC 20 mail to the directory <EDITOR>, be provided on an MS-DOS formatted 5.25 inch floppy disk, or be provided on a 3.5 inch micro floppy disk in Lisa (LisaWrite) or Macintosh (MacWrite) format. Contributions sent via DEC 20 mail must be in ASCII (i.e., be plain text), and may have embedded Scribe commands. Acceptable MS-DOS document formats are:

- ASCII (not word-processed)
- DisplayWrite2
- EasyWriter
- Freestyle
- MS-Word
- PC-Write
- PeachText
- WordMARC
- WordStar

Printed copy will be accepted, but please try one of the above methods (especially for articles and other long contributions). All mailed contributions (whether on diskette or printed) should be sent to the following address:

Editor, Computing at Lehigh
196 Fairchild-Martindale #8b
Computing Center
Lehigh University
Bethlehem, PA 18015

Articles by users are included at the Computing Center's discretion. The Computing Center reserves the right to edit all contributions.

Article submissions should be completed by the 15th of even-numbered months. *Be sure* to include your name, mailing address, and phone number.

Computing at Lehigh Mailing List

Check one:

- ☐ **ADD** my name to the mailing list.
- ☐ **CHANGE** my address on the mailing list. (List both old and new addresses and be sure to include the Zip Codes.)
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